SIEMENS VDO

IMPLEMENTATION GUIDELINES FOR ANSI X12 EDI CONVENTIONS
FUNCTIONAL ACKNOWLEDGE (997)

Created: March 19, 2004
Modified: August 16, 2006

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997 FUNCTIONAL ACKNOWLEDGE

INTRODUCTION:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Functional Acknowledgment Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to define the control structures for a set of acknowledgments to indicate the results of the syntactical analysis of the electronically encoded documents. The encoded documents are the transaction sets, which are grouped in functional groups, used in defining transactions for business data interchange. This standard does not cover the semantic meaning of the information encoded in the transaction sets.

NOTES:

Use this implementation convention to acknowledge receipt, and acceptance or rejection of a functional group and the transaction set(s) contained within it based upon EDI translation software syntax edits.

Heading & Detail Section:

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5	010	ST	Transaction Set Header	M	1		n1
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Transaction Set Notes

1. These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments. Nor shall a Functional Acknowledgment be sent to report errors in a previous Functional Acknowledgment.
The Functional Group Header Segment (GS) is used to start the envelope for the Functional Acknowledgment Transaction Sets. In preparing the functional group of acknowledgments, the application sender's code and the application receiver's code, taken from the functional group being acknowledged, are exchanged; therefore, one acknowledgment functional group responds to only those functional groups from one application receiver's code to one application sender's code.
There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.

2. AK1 is used to respond to the functional group header and to start the acknowledgement for a functional group. There shall be one AK1 segment for the functional group that is being acknowledged.

3. AK2 is used to start the acknowledgement of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

Transaction Set Comments

1. The data segments of this standard are used to report the results of the syntactical analysis of the functional groups of transaction sets; they report the extent to which the syntax complies with the standards for transaction sets and functional groups. They do not report on the semantic meaning of the transaction sets (for example, on the ability of the receiver to comply with the request of the sender).

2. The default separator values in our ANSI transmission are followed by 2 hexadecimal symbols (0D, 0A) required in our VAN transmission protocol, these symbols may cause problems when processing the EDI data, depending on the SW that is being used to translate the information.

ISA Interchange Control Header

Position: 000
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To start and identify an interchange of one or more functional groups and interchange related control segments.
Syntax Notes:
Semantic Notes:
Comments:

EXAMPLE:

ISA*00* *00* *12*2129866770 *ZZ*SVAUTONA *020227*0802*U*00410*000000013*0*P*:

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**ISA01**	**I01**	**Authorization Information Qualifier** 00 - No Authorization Information Present	**M ID 2/2**
	ISA02	**I02**	**Authorization Information** Information used for additional identification or authorization of the interchange sender or the data in the interchange; the type of information is set by the Authorization Information Qualifier.	**M AN 10/10**
M	**ISA03**	**I03**	**Security Information Qualifier** Code to identify the type of information in the Security **00 - No Security Information Present**	**M ID 2/2**
	ISA04	**I04**	**Security Information** **THIS IS USED FOR IDENTIFYING THE SECURITY INFORMATION ABOUT THE INTERCHANGE SENDER OR THE DADA IN THE INTERCHANGE ; THE TYPE OF INFORMATION IS SET BY THE SECURITY INFORMATION QUALIFIER.**	**M AN 10/10**
M	**ISA05**	**I05**	**Interchange ID Qualifier** Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified. **Siemens' Qualifier: ZZ**	**M ID 2/2**
M	**ISA06**	**I06**	**Interchange Sender ID** Identification code published by the sender for other parties to use as the receiver Id to route data to them; the sender always codes this value in the sender ID. Siemens' ID: **SVAUTONA**	**M AN 15/15**
M	**ISA07**	**I05**	Interchange ID Qualifier Qualifier to designate the system/method of code structure used to designate the sender or receiver ID element being qualified. **Seller's Qualifier**	**M ID 2/2**
M	**ISA08**	**I07**	**Interchange Receiver ID** Identification code published by the receiver of th data; When sending, it is used by the sender as their sending ID, thus other parties sending to them will use this as a reciving ID	**M AN 15/15**

to route data to them.

M	**ISA09**	**I08**	**Interchange Date** Interchange Date	**M**	**DT 6/6**
M	**ISA10**	**I09**	**Interchange Time** Time of the interchange	**M**	**TM 4/4**
M	**ISA11**	**I10**	**Interchange Control Standards Identifier** Code to identify the agency responsible for the control standard used by the message that is enclosed by the interchange header and trailer. U U.S. EDI Community of ASC X12, TDCC and UCS	**M**	**ID 1/1**
M	**ISA12**	**I11**	**Interchange Control Version Number** This version number covers the interchange control segments Release 4010: **00410**	**M**	**ID 5/5**
M	**ISA13**	**I12**	**Interchange Control Number** A control number assigned by the interchange sender	**M**	**N0 9/9**
M	**ISA14**	**I13**	**Acknowledgment Requested** ***Code sent by the sender to request an interchange acknowledgement.*** **1** Interchange Acknowledgment Requested	**M**	**ID 1/1**
M	**ISA15**	**I14**	Test Indicator Code to indicate whether data enclosed by this interchange envelope is test or production. **P** Production Data **T** Test Data	**M**	**ID 5/5**
M	**ISA16**	**I15**	**Component Element Separator** ***The component element separator is a delimiter and not a data element; this field provides the delimiter used to separates component data element within a composite data structure; this value must be different than the data element separator and the segment terminator.*** ***: Component element separator to 4010.***	**M**	**AN 1/1**

GS Functional Group Header

Usage: Mandatory
Max Use: 1
Purpose: To indicate the beginning of a functional group and to provide control information.
Syntax Notes:
Semantic Notes: The data interchange control number GS06 in this header must be identical to the same data element in the associated functional group trailer, GE02.
Comments: A functional group of related transaction sets enclosed by a functional group header and a functional group trailer.

EXAMPLE:

GS*FA*2129866770*SVAUTONA*020227*0802*13*X*00410

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	**GS01**	**479**	**Functional Identifier Code** Code identifying a group of application related transaction sets.	**M**	**ID 2/2**
	GS02	**142**	**Application Sender's Code** Code identifying party sending transmission.	**M**	**AN 2/15**
M	**GS03**	**124**	**Application Receiver's Code** Code identifying party receiving transmission.	**M**	**AN 2/15**
	GS04	**29**	**Data Interchange Date** Date sender generated a functional group of transaction sets.	**M**	**DT 6/6**
M	**GS05**	**30**	**Data Interchange Time** Time (HHMM) when the sender generated a functional group of transaction sets (local time at sender's location).	**M**	**TM 4/4**
M	**GS06**	**28**	**Data Interchange Control Number** Assigned number originated and maintained by the sender.	**M**	**N0 1/9**
M	**GS07**	**455**	Responsible Agency Code Code used un conjunction with Data Element 480 to identify the issuer of the standard.	**M**	**ID 1/2**
M	**GS08**	**480**	**Version/Release/Industry Identifier Code** Code indicating the version, release, sub release, and industry identifier of the EDI standard being used. Position 1-3, Major Version Number; Positions 4-6, Release Level of Version; Positions 7-12, Industry or Trade Association ID. *(Optionally assigned by user).*	**M**	**AN 1/12**

ST Transaction Set Header

Position: 010
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To indicate the start of a transaction set and to assign a control number
Syntax Notes:
Semantic Notes: **1** The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).
Comments:

EXAMPLE:

ST*997*000000001

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**ST01**	**143**	**Transaction Set Identifier Code** Code uniquely identifying a Transaction Set ***997 Functional Acknowledgment***	**M ID 3/3**
M	**ST02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set ***Use to transmit a unique number assigned by the originator of the transaction set. The number may be system generated. This same number will be cited in SE02.***	**M AN 4/9**

AK1 Functional Group Response Header

Position: 020
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To start acknowledgment of a functional group
Syntax Notes:
Semantic Notes:
1 AK101 is the functional ID found in the GS segment (GS01) in the functional group being acknowledged.
2 AK102 is the functional group control number found in the GS segment in the functional group being acknowledged.
Comments:

1. ***Use to identify the unique identification number of the functional group in which the transaction set(s) being acknowledged was received.***
2. ***Only one functional group may be referenced in a single 997 acknowledgment transaction set.***

EXAMPLE:

AK1*PS*002922649

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**AK101**	**479**	**Functional Identifier Code** Code identifying a group of application related transaction sets ***Cite, using the appropriate code from the X12 code list, the functional group ID found in GS01 of the functional group being acknowledged.*** Refer to 004010 Data Element Dictionary for acceptable code values.	**M ID 2/2**
M	**AK102**	**28**	**Group Control Number** Assigned number originated and maintained by the sender ***Use to identify the number cited in GS06 of the functional group being acknowledged.***	**M N0 1/9**

AK2 Transaction Set Response Header

Position: 030
Loop: AK2 Optional
Level:
Usage: Optional
Max Use: 1
Purpose: To start acknowledgment of a single transaction set
Syntax Notes:
Semantic Notes:
1 AK201 is the transaction set ID found in the ST segment (ST01) in the transaction set being acknowledged.
2 AK202 is the transaction set control number found in the ST segment in the transaction set being acknowledged.

Comments:

1. Use to identify the unique identification number of the transaction set being acknowledged.

2. AK2 and AK5 shall be provided for each transaction set that is accepted. Also, AK2 and AK5 shall be provided for each transaction set being rejected for containing a syntactical error.

EXAMPLE:

AK2*830*002922667

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**AK201**	**143**	**Transaction Set Identifier Code** Code uniquely identifying a Transaction Set Refer to 004010 Data Element Dictionary for acceptable code values.	**M ID 3/3**
M	**AK202**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set ***Use to identify the number cited in SE02/ST02 of the transaction set being acknowledged.***	**M AN 4/9**

AK3 Data Segment Note

Position: 040
Loop: AK3 Optional
Level:
Usage: Optional
Max Use: 1
Purpose: To report errors in a data segment and identify the location of the data segment
Syntax Notes:
Semantic Notes:
Comments: ***This 1/AK3/040 loop shall be used only to identify one or more segments containing syntactical errors resulting in rejection of the transaction set or functional group. This loop shall not be used when transaction set and functional group receipt and acceptance is being acknowledged***

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**AK301**	**721**	**Segment ID Code** Code defining the segment ID of the data segment in error (See Appendix A - Number 77) ***Use to identify the segment containing syntactical errors, as it appears in the ASC X12 Data Segment Dictionary, e.g., DTM, N1, REF, etc.***	**M ID 2/3**
M	**AK302**	**719**	**Segment Position in Transaction Set** The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1 ***Use to identify the segment's sequential position within the data stream of the transaction set as transmitted. This number is not the segment's position number portrayed in the transaction set structure. For example, if the segments used in an 810 request for progress payment were as follows: ST, BIG, REF, N1, N1, PER, ITD, DTM, IT1, IT1, SLN, SLN, SLN, TDS, CTT, SE, and there was a syntax error in the second use of the N1 segment, the number cited would be 5. If the syntax error was in the third use of the SLN segment, the number cited would be 13.***	**M N0 1/6**
M	**AK303**	**447**	**Loop Identifier Code** The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE	**O AN 1/6**
M	**AK304**	**720**	**Segment Syntax Error Code** Code indicating error found based on the syntax editing of a segment ***Use only when a segment is being rejected, to identify the basis for rejection. Do not use when the error is in a data element within the segment and editing is being done at least to that level.*** Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**

AK4 Data Element Note

Position: 050
Loop: AK3 Optional
Level:
Usage: Optional
Max Use: 99
Purpose: To report errors in a data element or composite data structure and identify the location of the data element
Syntax Notes:
Semantic Notes: **1** In no case shall a value be used for AK404 that would generate a syntax error, e.g., an invalid character.
Comments:

Use to identify an error with a data element. When used, there must be a use of the AK3 segment citing the segment in which the data element with the error appears. Use multiple ccurrences of this segment to identify all data element errors within the segment specified in the preceding AK3 segment.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	**AK401**	**C030**	**Position in Segment** Code indicating the relative position of a simple data element, or the relative position of a composite data structure combined with the relative position of the component data element within the composite data structure, in error; the count starts with 1 for the simple data element or composite data structure immediately following the segment ID	**M**	
M	**C03001**	**722**	**Element Position in Segment** This is used to indicate the relative position of a simple data element, or the relative position of a composite data structure with the relative position of the component within the composite data structure, in error; in the data segment the count starts with 1 for the simple data element or composite data structure immediately following the segment ID ***Use to indicate the position of the data element, within the segment, containing the error, e.g., 3, 12, etc.***	**M**	**N0 1/2**
	C03002	**1528**	**Component Data Element Position in Composite** To identify the component data element position within the composite that is in error	**O**	**N0 1/2**
M	**AK402**	**725**	**Data Element Reference Number** Reference number used to locate the data element in the Data Element Dictionary ***Use to identify the data element number as it appears in the ASC X12 Data Element Dictionary, for example, the data element number for N101 is 98, the data element number for N103 is 66.***	**O**	**N0 1/4**
M	**AK403**	**723**	**Data Element Syntax Error Code** Code indicating the error found after syntax edits of a data element Refer to 004010 Data Element Dictionary for acceptable code values.	**M**	**ID 1/3**
	AK404	**724**	**Copy of Bad Data Element** This is a copy of the data element in error	**O**	**AN 1/99**

AK5 Transaction Set Response Trailer

Position: 060
Loop: AK2 Optional
Level:
Usage: Mandatory
Max Use: 1
Purpose: To acknowledge acceptance or rejection and report errors in a transaction set
Syntax Notes:
Semantic Notes:
Comments:

Use to indicate whether the transaction set indicated in the corresponding AK2 segment was accepted or rejected. If the transaction set is being rejected, use this segment to identify up to five (5) syntax errors at the transaction level.

EXAMPLE:

AK5*A

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**AK501**	**717**	**Transaction Set Acknowledgment Code** Code indicating accept or reject condition based on the syntax editing of the transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	**M ID 1/1**
M	**AK502**	**718**	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set ***1. Use only when a transaction set is being rejected, to identify the basis for rejection. If multiple codes apply, they may be carried in AK503 through AK506, as necessary. No individual code may be used more than once in a single use of this segment.*** ***2. Use code 5 when the 1/AK3/040 loop is not used and syntactical errors occurred below the transaction set level.*** Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**
	AK503	**718**	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**
	AK504	**718**	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**
	AK505	**718**	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**
	AK506	**718**	**Transaction Set Syntax Error Code** Code indicating error found based on the syntax editing of a transaction set Refer to 004010 Data Element Dictionary for acceptable code values.	**O ID 1/3**

AK9 Functional Group Response Trailer

Position: 070
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To acknowledge acceptance or rejection of a functional group and report the number of included transaction sets from the original trailer, the accepted sets, and the received sets in this functional group
Syntax Notes:
Semantic Notes:
Comments: **1** If AK901 contains the value "A" or "E", then the transmitted functional group is accepted.

1. Use only to indicate whether the functional group was accepted or rejected based on syntax errors in the functional group header or trailer.

2. If a functional group is rejected, all transaction sets within that group must be rejected using the AK9. In this case, individual AK2s for the rejected transaction sets need not be provided.

If the functional group is being rejected, use to identify up to five (5) syntax errors at the functional group level.

EXAMPLE:

AK9*A*1*1*1

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**AK901**	**715**	**Functional Group Acknowledge Code** Code indicating accept or reject condition based on the syntax editing of the functional group Refer to 004010 Data Element Dictionary for acceptable code values.	**M ID 1/1**
M	**AK902**	**97**	**Number of Transaction Sets Included** Total number of transaction sets included in the functional group or interchange (transmission) group terminated by the trailer containing this data element	**M N0 1/6**
M	**AK903**	**123**	**Number of Received Transaction Sets** Number of Transaction Sets received	**M N0 1/6**
	AK904	**2**	**Number of Accepted Transaction Sets** Number of accepted Transaction Sets in a Functional Group	**M N0 1/6**
M	**AK905**	**716**	**Functional Group Syntax Error Code** Code indicating error found based on the syntax editing of the functional group header and/or trailer ***1. Use only when a functional group is being rejected to identify the basis for rejection.***	**O ID 1/3**

2. Codes may also be carried in AK906 through AK909, but no individual code may be used more than once in a single iteration of this segment.

Refer to 004010 Data Element Dictionary for acceptable code values.

AK906	**716**	**Functional Group Syntax Error Code**	**O**	**ID 1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer
Refer to 004010 Data Element Dictionary for acceptable code values.

AK907	**716**	**Functional Group Syntax Error Code**	**O**	**ID 1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer
Refer to 004010 Data Element Dictionary for acceptable code values.

AK908	**716**	**Functional Group Syntax Error Code**	**O**	**ID 1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer
Refer to 004010 Data Element Dictionary for acceptable code values.

AK909	**716**	**Functional Group Syntax Error Code**	**O**	**ID 1/3**

Code indicating error found based on the syntax editing of the functional group header and/or trailer
Refer to 004010 Data Element Dictionary for acceptable code values.

SE Transaction Set Trailer

Position: 080
Loop:
Level:
Usage: Mandatory
Max Use: 1
Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)
Syntax Notes:
Semantic Notes:
Comments: **1** SE is the last segment of each transaction set.

EXAMPLE:

SE*000006*000000001

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**SE01**	**96**	**Number of Included Segments** Total number of segments included in a transaction set including ST and SE segments	**M N0 1/10**
M	**SE02**	**329**	**Transaction Set Control Number** Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set ***Use the same number cited in ST02.***	**M AN 4/9**

GE Functional Group Trailer

Usage: Mandatory
Max Use: 1
Purpose: To indicate the end of a functional group and to provide control information.
Syntax Notes:
Semantic Notes: **1** The data interchange control number GE02 in this trailer must be identical to the same data element in the associated functional group header, GS06.

Comments: **1** The use of identical data interchange control numbers in the associated functional group header and trailer is designed to maximize functional group integrity. The control number is the same as that used in the corresponding header

EXAMPLE:

GE*1*2922649

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**GE01**	**97**	**Number of Transaction Sets Included** Total number of transaction sets included in the functional group or interchange (transmission) group.terminated by the trailer containing this data element.	**M N0 1/6**
M	**GE02**	**28**	**Group Control Number** Assigned number originated and maintained by the sender.	**M N0 1/9**

IEA Interchange Control Trailer

Usage: Mandatory
Max Use: 1
Purpose: To define the end of an interchange of zero or more functional groups and interchange-related control segments.
Syntax Notes:
Semantic Notes:
Comments:

EXAMPLE:

IEA*1*19649

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	**IEA01**	**479**	**Functional Identifier Code** A count of the number of functional groups included in an interchange.	**M**	**N0 1/5**
M	**IEA02**	**142**	**Interchange Control Number** A control number assigned by the interchange sender.	**M**	**N0 9/9**

997 EXAMPLE

ISA*00* *00* *12*2129866770 *ZZ*SVAUTONA
*020227*0802*U*00410*000000013*0*P*:
GS*FA*2129866770*SVAUTONA*20020227*0802*13*X*004010
ST*997*130001
AK1*PS*015281148
AK2*830*015281148
AK5*A
AK2*830*015283128
AK5*A
AK2*830*015283324
AK5*A
AK9*A*3*3*3
SE*000006*130001
GE*1*13
IEA*1*13